

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Fournier Creek Salvage
Proposed Implementation Date:	December 1, 2007
Proponent:	DNRC- Missoula Unit
Location:	Section 36 T15N R21W
County:	Missoula

I. TYPE AND PURPOSE OF ACTION

The DNRC Missoula Unit is planning the salvage harvest of approximately 7000 tons (1 million board feet) of timber burned in the Black Cat fire in August of 2007. Harvest could take place on up to 120 acres and may include the construction of up to one mile of new road. The primary project objective is to generate revenue for the Common Schools Trust through harvest of burned timber.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project.

Public scoping was initiated on September 10, 2007 and included the mailing of notices to known interested parties, posting of the notice in public buildings in the project vicinity, advertising in the *Missoulian* and personal contact with adjacent landowners. Input was solicited from DNRC wildlife biologist Mike McGrath, soils and hydrology specialist Gary Frank and archeologist Patrick Rennie during the same period. The public comment period was limited to 10 days to facilitate efficient removal of timber prior to timber value deterioration.

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

Haul road access would be required from Plum Creek Timber Company and the Lolo National Forest within their respective ownerships adjacent to the project area.

3. ALTERNATIVES CONSIDERED:

Alternative A: No Harvest (no action)

Burned timber would not be harvested at this time and no new roads would be constructed in association with the proposed harvest. No revenue would be generated in support of the Common Schools Trust. Ongoing DNRC permitted and approved activities would continue in the project area.

Alternative B: Harvest (action)

The proposed salvage would occur, yielding approximately 7000 tons of burned sawlog material from 120 acres. One mile of new road could be constructed in conjunction with the project. Ongoing DNRC permitted and approved activities would continue in the project area.

This alternative would contribute approximately \$140,000 (estimated at \$20/ton) in timber revenue to the Common Schools Trust and generate approximately \$22,750 (estimated at \$3.25/ton) in Forest Improvement fees.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

Soils within the proposed project area were assessed using the Missoula County Soil Survey and field reviews of the proposed harvest unit and proposed road locations. Most of the proposed harvest area and proposed new road locations are on soils classified as Winkler gravelly loam. The Winkler soil series consist of very deep, somewhat excessively drained soils that formed in colluvium derived from argillite and quartzite. These soils have relatively long seasons of use with low compaction hazard. These soils are also well suited for ground based harvest systems. Erosion risks are moderate on slopes of ranging from 20-30% and higher on slopes greater than 30%.

A small portion of the proposed harvest area (SW corner of harvest unit) is located on soils classified as Crow silt loam. The crow soil series consist of very deep, well drained soils that formed in alluvium. Crow soils have clay rich subsoil with low rock content and low bearing strength. These soils remain moist later into the spring and may not adequately dry out for heavy equipment operations until late-June.

Past activities potentially affecting soil productivity within the proposed project area are limited to old historic timber harvests utilizing horse logging systems. Cumulative effects evident today are limited to several horse logging skid trails. These trails represent only a small portion (less than 1%) of the overall project area impacted.

The proposed action includes approximately 114 acres of salvage harvest of trees subjected to stand replacement fire and approximately 1 mile of new road construction within the proposed harvest area. Access to the proposed harvest area would utilize several miles of high standard existing road located on US Forest Service and Plum Creek Timberlands. The proposed action would include improvements and /or agreements with the US Forest Service and Plum Creek to address the post-fire BMP needs of the additional roads accessing the proposed project area.

Most of the proposed harvest area and the new road construction are located on gentle to moderate slopes with well drained soils having high rock content (Winkler soils). These soils are well suited for road construction, ground based harvest operations on gentle to moderate slopes and cable based harvest operations on steeper slopes. There would be low risk of substantial levels of additional soil erosion resulting from the proposed actions beyond those expected to occur under no action from post fire effects on these soils.

A small portion of the proposed harvest area and a short segment of the proposed new road construction are located on clay-rich soils with lower rock content (Crow silty loams). These soils have higher erosion risk, low bearing strength and are susceptible to compaction and rutting when wet. These limitations would be mitigated by limiting the season of road use and harvest operations to dry, frozen or snow covered conditions. Winter road construction on steeper slopes within this area may require $\frac{3}{4}$ or full bench road construction methods. If balanced construction methods are utilized, the risk of long-term fill slope instability could also be mitigated by obliterating (pulling the fill on) the short segment of road located on steeper slopes with Crow soils after use.

Erosion risk would also be mitigated by utilizing cable harvest systems on a large portion of the proposed harvest area. Even a large portion of the harvest unit that contains slopes suitable to ground based harvest would be cable harvested due to lack of feasible road accesses. Additional mitigation would include excluding ephemeral draw bottoms and isolated steeper side slopes from tractor operations.

Soil monitoring results from recent DNRC fire salvage harvests have demonstrated that erosion was slightly higher on harvested versus non-harvested sites, but was not statistically significant ($p=0.05$) (DNRC, 2002). These results also found that woody debris levels were significantly higher in harvested sites, but the degree to which this acted as an erosion barrier can only be estimated (DNRC, 2002). Winter harvest in post-fire units

also found no observable soil displacement (DNRC, 2002). This was largely attributed to restrictions placed on equipment operations during periods of frozen ground conditions. Using these data to estimate the direct and indirect effects of the proposed action is useful. Erosion rates following implementation of the Action Alternative would likely increase compared to the no action alternative but the effect on the soil resource when compared in spatial extent to the wildfire effects is minimal. If mitigation measures are administered, conclusions drawn about post-fire winter harvest ground disturbances from DNRC's previous monitoring efforts are applicable. Direct and indirect effects of the proposed action would have negligible effects on the soil resource in the project area.

Under the proposed action, cumulative soils effects would include erosion, compaction and displacement resulting from cable yarding and ground based equipment operations. Through monitoring efforts of the DNRC, it has been shown that ground based tractor skidding typically disturbs approximately 15% of the harvest unit (DNRC, 1996). Less disturbance is typically observed with cable systems or ground based equipment operation completed during winter operations with adequate snowpack or periods of frozen ground. Downed woody material would be beneficial to the soil resource by providing shade and cover and moisture retention to the soil surface and provide a nutrient source for the recovering soil.

It has been commonly accepted by state and federal agencies and researchers that 20% disturbance by displacement and compaction is an acceptable threshold where detrimental effects to soil productive begin to be observed. The remaining impacts to soils from historic horse logging are very low (estimated at less than 1% of project area). If proper mitigations are designed and implemented correctly, disturbance within harvest units would be below this threshold and cumulative soil effects from ground based operation would be minimal. Approximately 1 mile of new road construction would be required to access harvest units and would have detrimental effects to those locations. Access to this road is limited, given the locked gate on the existing Plum Creek access, which would limit traffic to administrative purposes after project completion.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

The proposed project area is located in the Mill Creek watershed. Mill Creek is a 3rd order, Class I, perennial tributary to the Clark Fork River with a watershed area of approximately 23,555 acres. Maximum elevation in the headwaters of the watershed is 6,793 feet and minimum elevation in the watershed is 3,020 feet. Annual precipitation in the watershed ranges from 13 to 40 with a weighted mean of approximately 31.4 inches. Most of the proposed salvage activities are located on gentle to moderate slopes located approximately ¼ to ½ mile above the mainstream Mill Creek. A small portion (< 3 acres) of the proposed harvest area is located in the Fournier Creek watershed. Fournier Creek is a small 2nd order, perennial, class I tributary to Mill Creek. This portion of the proposed harvest area is located on moderate slopes more than ¼ mile from Fournier Creek.

This portion of the Clark Fork River basin, including the Mill Creek drainage, are classified B-1 in the Montana Water Quality Standards. Waters classified B-1 are suitable for drinking, culinary and food processing purposes after conventional treatment; bathing, swimming and recreation; growth and propagation of salmonid fishes and associated aquatic wildlife, waterfowl and furbearers; and agricultural and industrial water supply. State water quality regulations prohibit any increase in sediment above naturally occurring concentrations in waters classified B-1 (ARM 16.20.618 2(f)). Naturally occurring means conditions or materials present from runoff or percolation over which man has no control or from developed land where all reasonable land, soil and water conservation practices have been applied. Reasonable land, soil and water conservation practices include methods, measures or practices that protect present and reasonably anticipated beneficial uses. The state of Montana has adopted Forestry Best Management Practices (BMP's) through its Non-point Source Management Plan as the principal means of meeting Water Quality Standards.

There are existing water rights for domestic, irrigation, livestock, lawn and garden and fish and wildlife beneficial uses located downstream of the proposed project area. Mill Creek has been identified as impaired on the Montana 2006 303(d) list. Mill Creek is impaired because its aquatic life support and cold water fisheries beneficial uses are only partially supported. However, Mill Creek has been categorized in the State's

assessment as 4C. Streams categorized as 4C do not require development of a Total Maximum Daily Load (TMDL) because no pollutant related use impairment has been identified.

Approximately 5,122 acres or 22% of the Mill Creek drainage was burned over in the Black Cat Fire during August of 2007. Most of the burned area within the watershed was subject to only low or moderate burn severity. Approximately 518 acres or 2.2% of the watershed burned with low severity and 1,717 acres or 7.3% of the watershed area burned with moderate severity. Only 1,046 acres or 4.4% of the watershed area burned with high severity. Substantial precipitation events with appreciable amounts of surface runoff following the fire have not yet occurred. Therefore, increased rates of surface runoff, erosion and/or sediment delivery have not been observed at this time.

The proposed harvest area and proposed new road locations were reviewed in the field. No stream channels or other surface water features were identified within the proposed harvest area or near the new road locations. Surface drainage features within the proposed harvest area are limited to ephemeral swales and draws without discernable channels. All ephemeral drainage features draining the proposed project area discontinuous and there is no means of direct delivery of concentrated surface runoff from the project area to down slope stream channels.

Access to the proposed project area is provided by existing high standard forest roads located on Lolo National Forest and Plum Creek Timber lands. DNRC is seeking temporary road use permits from both Plum Creek and the US Forest Service for the proposed use of these roads. The US Forest Service road is an open, high standard, all season road that utilizes a ditch and relief culvert drainage design. The road meets most road related BMPs, however, some ditch relief culvert maintenance and additional ditch relief would be needed to fully meet BMPs.

Access to the Plum Creek road is controlled by a locked gate. This road contains well spaced and adequately functioning road surface drainage features (drain dips). However, the fill slopes at the outlet of many of these drain dips have experienced moderate levels of erosion even in the pre-fire environment. Levels of erosion at drain dip outlet could become more severe with anticipated post-fire increases in runoff unless armoring is installed on these drain-dip outlets.

Due to the overall low levels of high burn severity within the watershed, the risk of future large watershed scale impacts from increased runoff, increased erosion, increased sediment delivery and/or increased stream flows are expected to be low to moderate. The risk of increased runoff, increased erosion and sediment delivery will be higher in those localized areas that burned with high severity. Most of the 140 forested acres of school trust land included in the analysis area burned with high severity. Therefore, the rates of runoff and surface erosion within the proposed project area are expected to be greatly elevated over pre-fire conditions for the first 1-2 years following the fire. Most if not all of the plant cover, duff layer and coarse woody debris protecting the soil were consumed by the fire. Erosion risk will remain high across the proposed project area until grass and other herbaceous plant cover is re-established and wind throw of fire killed trees occurs.

The ephemeral swales and draw features draining the proposed project area currently do not contain discernable stream channels. However, the expected increases in concentrated surface runoff following the fire may result in the erosion and down cutting of ephemeral and/or intermittent stream channels in these draw bottoms.

There are several existing roads located on US Forest Service and Plum Creek lands within the proposed project area. While these roads are high standard and largely have adequate drainage feature, they do not meet all road BMPs and impacts due to the increased runoff associated with post-fire effects can be anticipated. For example, several ditch relief culverts on the Forest Service road are partially filled or plugged at the inlet. Another culvert doesn't have adequate outflow protection and subsequently the fill slope is eroding below the culvert outlet. There is also a long segment of unrelieved cut slope ditch that may not be able to accommodate the increased levels of runoff that can be anticipated under post-fire conditions. In addition, the outlets of many drain dips on the Plum Creek road have experienced moderate levels of fill slope erosion even prior to the recent wildfire. The level of fill slope erosion occurring at these drain dip outlets can be expected to become more severe following the wildfires unless armoring is installed to protect the fills.

There would likely be a low risk of direct or indirect impacts to water quality due to increased sediment delivery to Mill Creek or Fournier Creek resulting from the proposed activities. Post-fire rates of erosion would likely be elevated in localized areas that were subject to high burn severity. However, the proposed harvest activities would not be expected to increase the levels of erosion substantial over those occurring from the fire. There would be low risk of sediment delivery resulting from the proposed harvest activities due to the lack of stream channels or continuous ephemeral drainage features within the proposed project area. Both Fournier Creek and Mill Creek are also well buffered from the proposed activities. The proposed harvest activities are located at least ¼ mile from both streams. The proposed road locations are approximately ½ mile from either stream. The buffer area would include broad terraces and bench features with low burn severity. Improvements to the existing road system carried out under the proposed action and/or under agreement with road owners are expected to reduce the risk of erosion and sediment delivery to Fournier Creek and Mill Creek than would be expected under no action.

There would likely be a low risk of cumulative watershed impacts occurring in Mill Creek as a result of the proposed actions. Cumulative impacts due to increased runoff, increased water yields to stream, and/or increased peak flows would not be expected to occur as a result of the proposed actions. The proposed harvests would only remove dead or dying trees that are not appreciable influencing water yields within the proposed project area. Water yield from the site would be expected to increase as a result of the wildfires. However, harvests and removal of dead and dying trees would not be expected to measurably increase water yields from those already occurring due to the fire.

6. AIR QUALITY:

What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

Minimal effects would be expected. Slash would be retained onsite with minimal burning required. Winter logging/hauling would minimize dust.

7. VEGETATION COVER, QUANTITY AND QUALITY:

What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

Vegetation communities were drastically altered by the high intensity fire which occurred in the project area in August, 2007, with tree mortality approaching 100%. Any green trees that are likely to survive based on forester's judgment would be retained. Noxious weed invasion that is commonly associated with salvage treatments would be addressed by equipment washing and inspection, disturbed site grass seeding and post harvest weed spraying and monitoring. As a result, the proposed action would have low risk of cumulative effects beyond those caused by the preceding fire.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

The following species were considered but eliminated from detailed study due to lack of habitat present: Harlequin Duck, Common Loon, Townsend's Big-eared Bat, Coeur d'Alene Salamander, Northern Bog Lemming, Mountain Plover, and Columbian Sharp-tailed Grouse.

Bald Eagle—The proposed action would harvest approximately 1 million board feet of burned timber from approximately 120 acres on the Fournier parcel. While an immature bald eagle was observed soaring near the affected parcel (M. McGrath, SWLO Wildlife Biologist, personal observation 7 September 2007), the nearest known nest is located >2.5 miles from the area that would be salvage harvested. Thus, because the affected area is outside of the Bald Eagle Home Range area (for use in ARM 36.11.429), and is not along a major water course, there would likely be low risk for direct, indirect, or cumulative effects to this species as a result of the proposed action.

Black-backed Woodpecker—The Black Cat fire burned approximately 11,736 acres within the fire perimeter: approximately 1,556 acres were unburned, 2,029 were low severity, 5,491 were moderate severity, and 2,389 were high severity. Approximately one-third of those acres were grassland. Within the two School Trust parcels, the Frog Creek parcel (43 acres) had 42 acres in low severity and 1 acre in high severity, while the forested portions of the Fournier parcel (135 acres) burned at high severity. The proposed action would set aside the Frog Creek parcel for black-backed woodpeckers as per ARM 36.11.438(1)(b). While the Frog Creek parcel was predominately a low intensity burn, it is adjacent to large patches of high and moderate intensity burn on tribal and USFS lands. Thus, when *Dendrochthonus* beetles would likely infest the Frog Creek parcel, the trees would likely serve as a food source for black-backed woodpeckers that may nest on adjoining ownerships, and would not be salvage logged for five years post-fire. The location of this set aside would also enable DNRC to minimize mechanized activity within 0.25 mile of black-backed woodpecker habitat on the affected parcels between April 15 and July 1 (ARM 36.11.438(1)(a)). At the broader, landscape scale, approximately 116,846 acres burned on 4 fires within a 50 mile radius of the project area this year, and approximately 128,041 acres burned within that same area in 2003. Thus, there is likely ample black-backed woodpecker habitat at the landscape scale. As a result, the proposed action of salvage harvesting approximately 1 million board feet on 120 acres would likely have low risk of direct, indirect, or cumulative effects to black-backed woodpeckers.

Fisher—The proposed action would salvage harvest timber on approximately 120 acres, with the affected parcel containing approximately 135 acres of habitat types associated with fishers. The affected area incurred approximately 132 acres of high intensity, stand replacing burn, thereby negating current value of the area for fisher habitat. Included in the proposed action are 3 areas that would not be harvested, and range in area from approximately 0.3 to 7.5 acres. All are located in dry draws. These leave areas would retain higher densities of snags that over time would fall and become coarse woody debris, or habitat features for fishers. Additionally, the affected area is >800 feet from Mill Creek, a fish-bearing stream, with several residences located between the riparian area and the affected parcel. As a result, there would likely be low risk of direct, indirect, or cumulative effects to this species as a result of the proposed action.

Flammulated Owl— The proposed action would salvage harvest timber on approximately 120 acres, with the affected parcel containing approximately 135 acres of habitat types associated with flammulated owls. The affected area incurred approximately 132 acres of high intensity, stand replacing burn, thereby temporarily negating current value of the area for flammulated owls. The proposed action would retain at least 1 snag and 1 snag recruit per acre, as per ARM 36.11.411, and would also retain 1 snag per acre whose $21 < \text{DBH} \leq 15$ inches, and may plant seedling to accelerate forest recovery. Such actions would provide habitat features for flammulated owls while reducing the time the affected area would be unsuitable for this species. As a result, there would likely be low risk of direct, indirect, or cumulative effects to this species as a result of the proposed action.

Pileated Woodpecker— Within the project area, there are approximately 27 acres of timber where the average stand dbh is ≥ 15 inches (DNRC Stand Level Inventory), while timber within the project area ranges between 7 and 24 inches dbh. Thus, prior to the fire, much of the project area, including the proposed harvest area, contained potential habitat for pileated woodpeckers. The fire burned approximately 135 acres of the project area, largely in a mosaic of low and moderate and high intensity burn (Fournier: 132 acres high intensity; Frog Creek: 1 acre high intensity, 42 acres low intensity). Given the intensity of fire on the Fournier parcel, many pileated woodpecker habitat characteristics were eliminated, while creating future foraging substrate. However, on the Frog Creek parcel, the mosaic of low fire intensity retained many pileated woodpecker habitat characteristics that would provide for post-fire habitat suitability. Additionally, the fire would likely improve habitat for pileated woodpeckers on the Frog Creek parcel because the fire may have killed trees of sufficient diameter for nesting or roosting, and the likely subsequent infestation by Douglas-fir and pine beetles would likely target trees that could become potential nest or roost trees. The proposed action would harvest fire-killed trees on approximately 120 acres, entirely on the Fournier parcel. However, salvage harvesting would not occur on the Frog Creek parcel, and subsequent bug-salvage would not occur on this parcel for at least 5 years post-fire. Under the ARM 36.11.411, an average of at least 1 snag and 1 snag recruit whose $\text{dbh} \geq 21$ inches (if not available, then the largest size class) would be retained per acre, under the fire salvage and likely future insect salvage. Additionally, the proposed action would retain 1 snag per acre whose $21 < \text{DBH} \leq 15$ inches, and may plant seedling to accelerate forest recovery. Snag retention would be concentrated >300 feet from open roads to decrease the likelihood of snag loss to firewood permittees. Because the proposed action would retain

suitable pileated woodpecker habitat on the Frog Creek parcel, there would likely be low risk of direct, indirect, and cumulative effects to pileated woodpeckers as a result of the proposed action.

Big Game— The project area contains winter range habitat for white-tail deer, mule deer, and elk. The fire removed snow-intercept cover on the Fournier parcel, while retaining all but 1 acre on the Frog Creek parcel. As a result, many of the trees on the Fournier parcel would likely serve as only visual screening cover until they eventually fall over. In subsequent years, through natural processes, the project area will likely provide ample forage through regenerating grasses, forbs, and shrubs, along with the adjacent regenerating Plum Creek ownership. The proposed action, through its proposal to salvage harvest ponderosa pine and Douglas-fir, would reduce visual screening cover during the hunting season. The Black Cat fire burned approximately 2,868 acres (primarily grassland) of white-tailed deer, 1,814 acres of forested mule deer, and 2,530 acres of primarily forested elk winter range at varying intensities, but primarily moderate fire intensity. Thus, while the Black Cat fire burned several thousand acres of winter range, Fournier Creek burned at stand replacing intensity while winter range elsewhere in the fire may have fared better. Therefore, the proposed action of salvage harvesting approximately 1 million board feet of timber on 120 acres would likely have low risk direct, indirect, and cumulative effects to local herds of white-tail deer, mule deer, and elk.

Fisheries— Mill Creek supports populations of native westslope cutthroat trout and mountain whitefish. Mill Creek also supports nonnative populations of brook trout, brown trout and rainbow trout. Both westslope cutthroat trout and mountain whitefish are classified as rare in abundance (MFISH 2007) and Montana Fish, Wildlife and Parks has identified Mill Creek as an important tributary to the Clark Fork River. Westslope cutthroat trout has been classified as a Class A Species of Concern in Montana. A Class designation is defined as a species or subspecies that has limited numbers and/of habitat both in Montana and elsewhere in North America, and elimination from Montana would be a significant loss to the gene pool of the species or subspecies. DNRC has also identified Westslope cutthroat trout as a sensitive species under ARM 36.11.436 Several restoration projects have been recently implemented to restore fish passage at road crossings in lower Mill Creek. There are no streams or other bodies of water supporting fisheries within the proposed harvest areas or immediately adjacent to the proposed road locations.

There would likely be a low risk of direct, indirect or cumulative impact to the fisheries in Mill Creek as a result of the proposed actions. Both Mill Creek and contributing flows from Fournier Creek are well buffered from the proposed activities. The proposed harvest activities are located at least ¼ mile from both streams. The proposed road locations are approximately ½ mile from either stream. Therefore, large woody debris, stream temperature and other riparian functions would not be directly or indirectly affected by the proposed action. Post-fire rates of erosion would likely be elevated on localized areas that were subject to high burn severity. However, the proposed harvest activities would not be expected to increase the levels of erosion substantial over those occurring from the fire. There would be low risk of sediment delivery resulting from the proposed harvest activities due to the lack of stream channels or continuous ephemeral drainage features within the proposed project area.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

Grizzly Bear—Grizzly bears have been occasional visitors to the nearby Ninemile Valley (10 miles to the west). Thus, grizzly bears may on occasion use the project area. The Fournier Creek parcel is located immediately adjacent to the residential Mill Creek Rd. and several residences to the NW. Access to the forested ground on Fournier is controlled through locked gates. As a result, the proposed construction of approximately 1 mile of new road would not increase open road densities. Additionally, due to the close proximity of inhabited residences, hospitable cover near these residences should not be encouraged so that bears may avoid attractant issues. Thus, the proposed action would likely have low risk of direct, indirect, and cumulative effects to grizzly bears.

Gray Wolf—The He-Wolf pack is located approximately 6 miles northwest of the Frog Creek parcel, and has been depredating livestock on the Flathead Reservation in 2007 (<http://www.fws.gov/mountain-prairie/species/mammals/wolf/>). While the proposed action would reduce screening cover on the Fournier

parcel through salvage harvesting approximately 120 acres, any new road construction would not create increased open road densities. Thus, the proposed action would likely have low risk of direct, indirect, and cumulative effects to wolves.

Canada Lynx—The Frog Creek parcel is currently mapped as “other” lynx habitat, and approximately 1 acre was burned at stand replacement, with the rest remaining relatively unchanged. The Fournier Creek parcel did not have lynx habitat prior to the fire. Thus, the proposed action of salvage harvesting approximately 120 acres on the Fournier Creek parcel would likely have low risk of direct, indirect, and cumulative effects to lynx.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

Identify and determine effects to historical, archaeological or paleontological resources.

None Identified.

11. AESTHETICS:

Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

The project area is within the larger perimeter of the Black Cat Fire where evidence of fire damage is clearly visible from most points. Adjacent forestlands exhibit visible roads and a mosaic of burned forest. Infrastructure features such as communication towers, fences and gravel pits are clearly evident where burned tree canopies no longer block the view. Due to the high intensity fire that occurred in the project area, nearly all trees are burned completely black and very few still have brown needles. One small stand (approximately 2 acres) has trees with green canopies that potentially could survive and will be not be harvested.

Portions of the project area are visible from Frenchtown, I-90, private property in the Mill Creek drainage and forest roads in Fournier Creek and Black Cat Gulch. Removal of burned timber would likely make the stand appear much thinner, with temporarily bare soil visible from a distance. Due to the burn severity, there would be very little red slash created. Roads constructed to access the project area and skid trails would be visible and may temporarily reduce the visible aesthetic quality of project area until vegetation is reestablished.

Noise created by logging equipment and log trucks could create a disturbance in residential areas of Mill Creek. Adjacent landowners have expressed tolerance for equipment noise and general support for the project (personal communication, Sept. 5, and Sept. 20, 2007). It is unlikely that the proposed action would have any major, long lasting or cumulative effect on the aesthetic quality of the area.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

The proposed action would not likely require the use of limited resources. Establishment of grass and forbs after harvest may improve the quality of grazing on the state lands currently under lease. The project area does not contain surface water or contribute flow to any water bodies. No effects would be expected.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

The Lolo National Forest and The Confederated Salish and Kootenai Tribes have expressed intent to salvage harvest burned timber on their respective ownerships within the Black Cat Fire perimeter. It is likely that the activities would occur during different time frames, possibly extending the duration of log hauling through residential areas. Landscape level vegetation changes could occur as a result of salvage harvest on multiple ownerships.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" if no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

Log truck operation on public roads and trucks entering public roads from forest roads may pose a temporary minor risk. Posted equipment operation signs and posted speed limits would be required

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

Identify how the project would add to or alter these activities.

The proposed action would likely have a negligible impact on these activities.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

The proposed action could provide employment for up to six logging positions for two months.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:

Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

Tax revenue would be realized from wood products industry jobs as a result of the proposed project. Due to the relatively small size of the project, there would likely be a negligible effect on tax revenues.

18. DEMAND FOR GOVERNMENT SERVICES:

Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services

Due to the relatively small size of the proposed project, there would likely be a negligible effect on government services as a result of the proposed project.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

The proposed project was designed to meet the forest management provisions of the State Forest Land Management Plan (SFLMP) and the Montana Environmental Policy Act (MEPA).

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

There has historically been moderate use of the project area for big game hunting. Due to the fire severity that occurred and the resulting displacement of big game, it is probable that the level of hunting activity would decrease. It is unlikely that logging would occur during the general big game season. The project would likely have a negligible effect on recreation.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

No changes in population or housing trends would be expected as a result of the proposed action. No effects would be expected.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

None Identified.

23. CULTURAL UNIQUENESS AND DIVERSITY:

How would the action affect any unique quality of the area?

None Identified.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

The proposed project would remove approximately 7000 tons of burned sawlogs and generate approximately \$140,000 for the Common Schools Trust (estimated @ \$20/ton) and \$22,750 in Forest Improvement Fees (estimated at \$3.25/ton). Investment of approximately \$20,000 could be required for access acquisition, road construction, grass seeding and potential weed spraying associated with the project. The increased availability of burned timber from large scale salvage projects by multiple land management entities in Western Montana may have a cumulative effect on log and lumber prices, to which this project may contribute.

EA Checklist Prepared By:	Name: Wayne Lyngholm	Date: 9/25/07
	Title: Management Forester	

V. FINDING

25. ALTERNATIVE SELECTED:

The action alternative proposed in this EA meets the project objective of recovering the value of burned timber to generate revenue for the common schools trust. It also provides for resource protection and mitigations for any potential adverse impacts. All Issues identified through the scoping process have been adequately addressed in this EA. For these reasons, I chose Alternative B: Harvest.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

Project design, resource protection measures and mitigations identified in this EA were developed through collaboration with resource specialists to minimize potential impacts and address issues. I therefore find that implementing the action alternative would not result in significant impacts.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

☐

EIS

☐

More Detailed EA

☒

No Further Analysis

EA Checklist Approved By:	Name: Jeffry L. Rupkalvis
	Title: Forest Management Supervisor
Signature: /s/ Jeffry L. Rupkalvis	
Date: 10/16/07	